Radio Frequency Identification (RFID)

Policy & Implementation

Defense Acquisition University
December, 2005

Major Briefing Points

- Policy

- Implementation

- Early Applications w/ Lessons Learned

- Final Thoughts

- Resources

Major Briefing Points

Policy

The Benefits of RFID for DoD

RFID allows:

- Non line-of-site/hands-free data capture
- Reduction in human intervention

Resulting in Improved:

- In-transit and asset visibility
- Timeliness and accuracy of shipping, receiving, and transportation
- Flexibility and confidence in the DoD Supply Chain

AND ultimately improved support to the warfighter

DoD's RFID Goals

- **Increase Warfighter/Customer Confidence in the Reliability of the DoD Supply Chain**

- **Improve Visibility of Information and Assets throughout the DoD Supply Chain**

- **Improve Process Efficiency of Shipping, Receiving and Inventory Management**

- **Reduce Order Ship Time and Customer Wait Time**

General Overview
What is RFID ?

- It is only one of a host of Automatic Identification technologies

- Specifically, RFID is a means of identifying an item based upon a radio transmission signal

- With some exceptions, the kinds of objects that RFID can either detect, identify, or track is wide and varied

- RFID communication occurs between a READER (*the Interrogator*) and a TRANSPONDER (*a silicon chip connected to an antenna*)

- The transponder is usually referred to as a TAG

Radio Frequency Identification
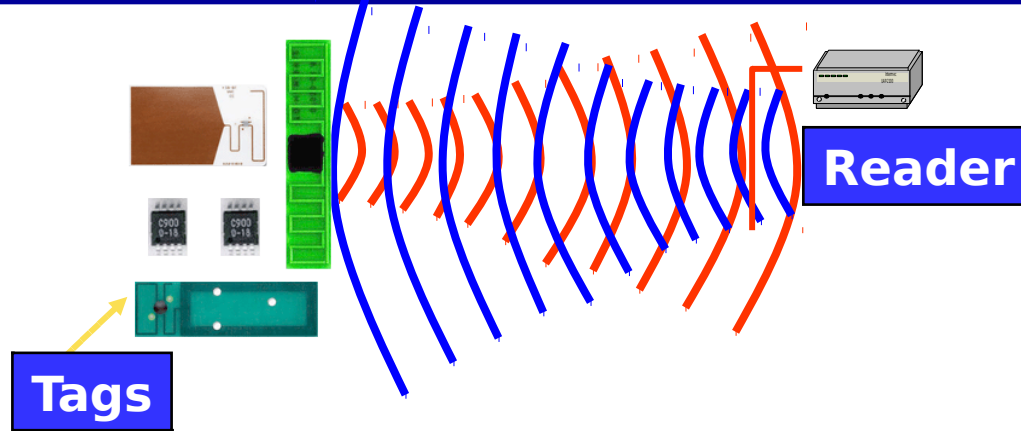
Reader

Tags

What is RFID?

- A means of identifying <u>a unique object or person</u> using a radio frequency transmission

- Tags (or transponders) that <u>store information</u>, which can be transmitted wirelessly in an automated fashion

- Readers (or interrogators) both stationary and hand-held <u>read/write information from/to tags</u>

How does it operate?

- RFID tags are <u>affixed to objects</u> and stored information may be written and rewritten to an embedded chip in the tag

- Tags can be <u>read remotely</u> when they detect a radio frequency signal from a reader over a range of distances

- Readers display tag information or send it over the enterprise network

Automated Identification Technology Suite

Linear Bar Code

2D Symbo...

OMC
Optical Memory Ca...

Optical Memory Card

STS
Satellite-Tracking Syste...

Smart Card/CA...

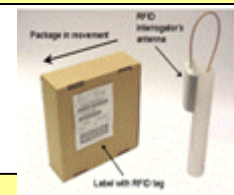**CMB**
Contact Memory Butt...

Contact Memory Button

RFID - Active
Radio Frequency ID

RFID - Passive
Radio Frequency ID

RFID Policy Memorandum
July 30th 2004

- **Finalizes the Business Rules for use of high data capacity Active RFID**

- **Finalizes business rules for phased implementation of Passive RFID and the use of Electronic Product Code™ (EPC) interoperable tags and equipment within DoD Supply chain**

  - **Army's PEO Enterprise Information Systems (PEO EIS) continues development of a multi-vendor contract mechanism to procure EPC technology**

- **Includes Three Attachments**

  - **Business Rules for Active RFID Technology**
  - **Business Rules for Passive RFID Technology**
  - **Supplier Implementation Plan**

RFID Policy Memorandum
Specifics

- **Internal DoD AIS funding will hinge on compliance with this policy**

- **That all DoD Suppliers will use EPC Compliant tags**

- **That DoD will migrate to the UHF Gen 2 Standard in approximately 2 years**

- **That RFID Policy will be written into the following documents:**
  - **DoD 4140.1-R: DoD Supply Chain Material Management Regulation**
  - **DoD 4500.9-R: The Defense Transportation Regulation**
  - **DODI 5000.2: Operation of the Defense Acquisition System**
  - **MIL-STD 129P: Military Marking for Shipment and Storage**

10

Electronic Product Code™ (EPC)

Background

- Auto-ID Center at MIT designed a system for bringing the benefits of Radio Frequency Identification to the global supply chain
- That system is comprised of the Electronic Product Code ™ (EPC), RFID Technology and supporting software based on EPCglobal standards.
- EAN International and the Uniform Code Council, Inc. (UCC) chosen as implementation partners
  - Formed EPCglobal Inc.™ which is a an open, worldwide,not-for-profit consortium of supply chain partners

EPCglobal Network Infrastructure/Components

- **Electronic Product Code – Unique Number that identifies a specific object in motion in the supply chain**
- **ID System – EPC Tags and EPC readers**
- **EPC Middleware – Manages basic read information**

Attachment 1
Business Rules for Active RFID Technology

- **Rules apply to ALL DoD Components**

- **Rules specifically apply to OCONUS Shipments**

- **Reconfigured shipments must have the Tag updated**

- **"RFID recorded events will become the automatic transactions of record"**

- **PM J-AIT will assist with frequency spectrum issues**

Attachment 2
Business Rules for Passive RFID Technology

- **RFID technical standard – EPC compliant**

- **RFID technology will not cover bulk commodities**

- **Electronic Data Interchange (ASN in MIRR via WAWF)**

- **Considered Normal Cost of doing Business**

- **PM J-AIT will assist with frequency spectrum issues**

Attachment 3
Supplier Implementation Plan

- **Roadmap targeting specific commodities and critical distribution functions at following types of sites:**
  - **DLA Depots**
  - **Depot Maintenance Activities**
  - **TRANSCOM Strategic Aerial Ports**
- **Phased implementation by type of commodity and distribution site**
  - **2005: Certain items to DLA Distribution Depot San Joaquin or Susquehanna,**
  - **2006: Additional items; Service depots plus DLA sites; TRANSCOM Air Mobility Command Terminals**
  - **2007: Supply classes have been identified by 2007 at individual case level, palletized loads; multi-pack pallets; and units containing a IUID item.**

The Scope of the Policy

Active RFID – **freight containers, air pallets, large engines**

- *SAVI 433 Mhz readers*
- *SAVI tags*
- *DoD tag data formats*
- *Suppliers rarely obligated to apply tags*

Passive RFID – **case, pallet (all items), item packaging (UID items)**

- *EPC std UHF readers*
- *EPC Class 0 & 1 std tags*
  - *Migration to EPC UHF Generation 2 std*
- *EPC and DoD tag data formats*
- *Suppliers will be contractually obligated to apply tags*
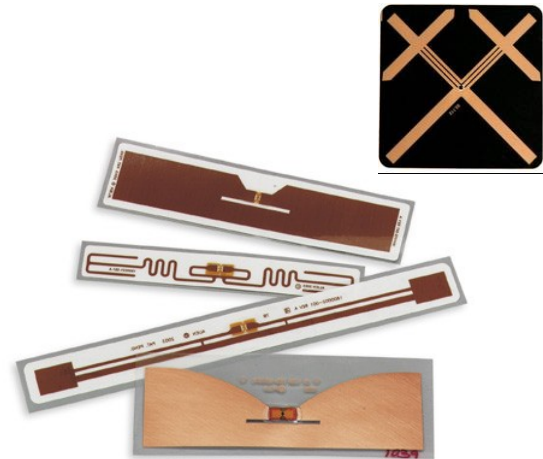
"TAG" Types

- **Passive Tags**

  – **Rely upon an external RF energy source in the form of an Interrogator/Reader**

  – **Best used when the tag and interrogator will be close to one another**

  – **Used on Cases and Pallets**

- **Active Tags**

  – **Use an internal power source in the form of a battery**

  – **Used when a longer tag read distance is desired**

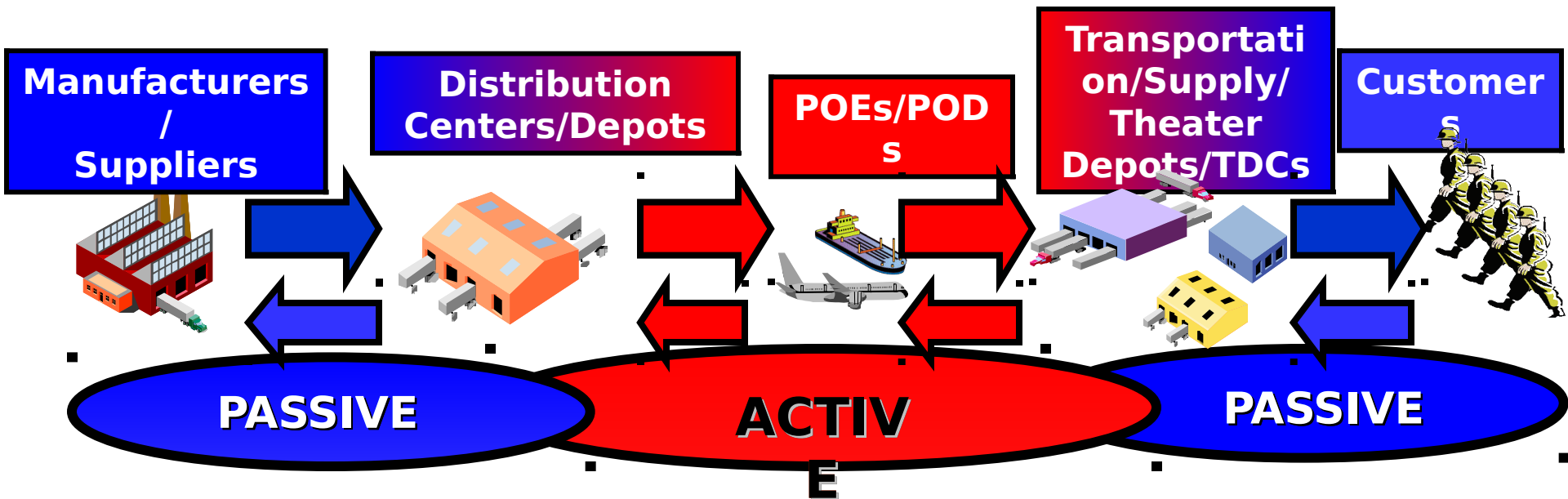 – **Used on shipping containers and 463L pallets**

Passive RFID Tag Data

- **Acceptable EPC tags:**
  - Class 0 64-bit Read Only
  - Class 1 64-bit Write Once Read Many (WORM)
  - Class 0 96-bit Read Only
  - Class 1 96-bit Write Once Read Many (WORM)
  - UHF, Gen 2 (when available)
- **Acceptable tag data constructs:**
  - Serialized Global Trade Item Number (SGTIN)
  - Global Returnable Asset Identifier (GRAI)
  - Global Individual Asset Identifier (GIAI)
  - Serialized Shipment Container Code (SSCC)
  - DoD construct

DoD will only accept EPC

Complementary Use of Active and Passive RFID Technology Across the Supply Chain

Manufacturers/Suppliers

Distribution Centers/Depots

POEs/PODs

Transportation/Supply/Theater Depots/TDCs

Customers

PASSIVE

ACTIVE

PASSIVE

RFID Policy Memoranda

The Policy memo with Attachments

and other information

are at the RFID Homepage
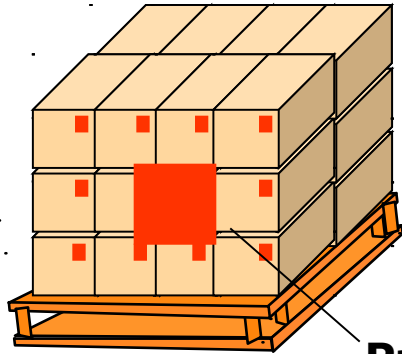
http://www.dodrfid.org

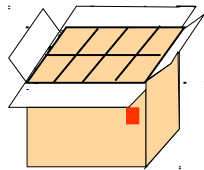# Major Briefing Points

Implementation

Implementation Plan: Level of Packaging
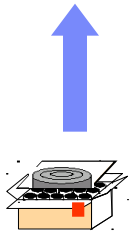
Palletized Unit Load Tag

YES 2005 - 2006

Pallet tag

Exterior Container

YES 2005 - 2006

Shipping Container

YES 2005 - 2006

UID Item Unit Pack*

No 2005 - 2006

YES 2007

* UID Packaging as an External Container/Shipping Container will also have an RFID tag.

21

Implementation Plan: Commodities

2005	2006
• Class I Subclass – Packaged Operational Rations & Packaged Food • Class II – Clothing, Individual Equipment, Tools, & Administrative Supplies • Class VI – Personal Demand Items • Class IX – Repair Parts & Components	• In addition to Class I Subclass, Class II, Class VI, & Class IX • Class III (P) – Packaged Petroleum, Lubricants, Oils, Preservatives, Chemicals & Additives • Class IV – Construction & Barrier Equipment • Class VIII – Medical Materials (Only Medical/Surgical Equipment)

DoD Sites Coming On-Line in 2006

- **Air Force Logistics Centers**
  - Ogden, UT

- **DLA Defense Distribution Depots**
  - Albany, GA
  - Anniston, AL
  - Barstow, CA
  - Cherry Point, NC
  - Columbus, OH
  - Corpus Christi, TX
  - Ogden, UT
  - Jacksonville, FL
  - Oklahoma, OK
  - Norfolk, VA
  - Puget Sound, WA
  - Red River, TX
  - Richmond, VA
  - San Diego, CA
  - Tobyhanna, PA
  - Warner Robins, GA

- **TRANSCOM Air Mobility Command Terminals**
  - Charleston, SC
  - Dover, DE
  - Fairfield, CA (Travis AFB)

Passive RFID Implementation Plan for DoD Suppliers

60,000 DoD Manufacturers/Suppliers

DFAR – new and revised contracts

Classes of Supply

Level of Tagging

Ship to Locations

2005
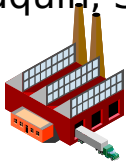
Classes of Supply:

- II, VI, IX, I (PORs/MREs)

Level of Tagging:

- Shipping Containers, Palletized Unit

Loads, Exterior Containers

Ship to locations:

- San Joaquin, Susquehanna

2006

Classes of Supply:

- I (PORs/MREs), II, III, IV, VI, VIII (Medical/Surgical Equipment)

Level of Tagging:

- Shipping Containers, Palletized Unit Loads, Exterior Containers

Ship to locations:

- Strategic CONUS DLA Depots, TRANSCOM Facilities & Service Maintenance Facilities

2007

Classes of Supply:

- All Classes will be tagged

Level of Tagging:

- Shipping Containers, Palletized Unit Loads, Exterior Containers, Unit Pack for UID Items

Ship to locations: All Locations that will be instrumented

24

Passive RFID Implementation Plan for DoD Suppliers

2005

Classes of Supply:

- II, VI, IX, I (PORs/MREs)

Level of Tagging:

- Shipping Containers
- Palletized Unit Loads
- Exterior Containers

Ship to locations:
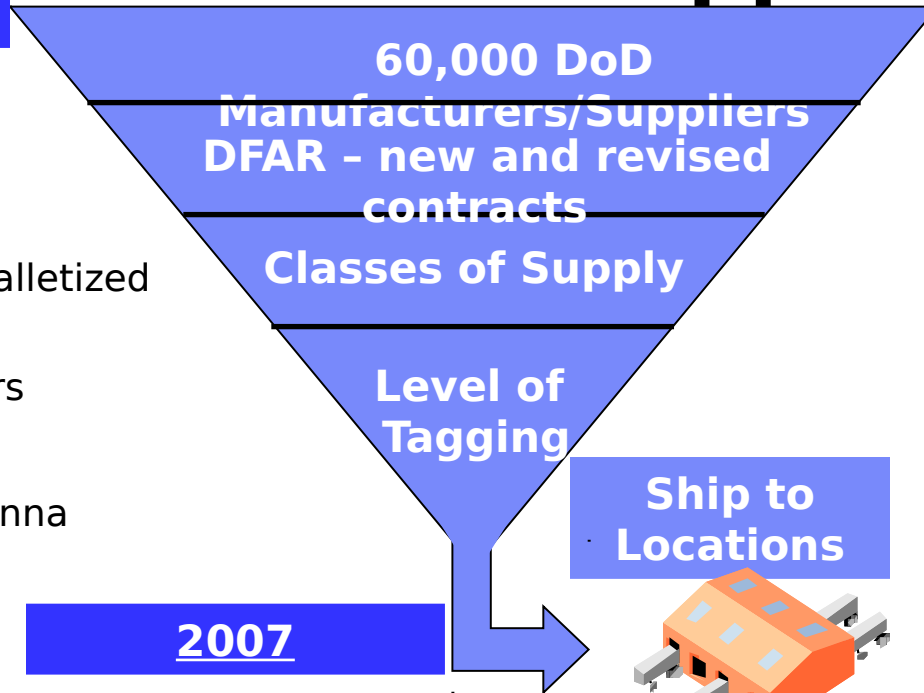
- San Joaquin, CA
- Susquehanna, PA

2006

Classes of Supply:

- Additional Classes; III (P), IV, VIII (Medical/Surgical)

Level of Tagging:

- Shipping Containers
- Palletized Unit Loads
- Exterior Containers

Ship to locations:

- Strategic CONUS DLA Depots
- TRANSCOM Facilities
- Service Maintenance Facilities (decision pending)

2007

Classes of Supply:

- All Classes that will be tagged

Level of Tagging:

- Shipping Containers
- Palletized Unit Loads
- Exterior Containers
- UID Item Unit Pack

Ship to locations:

- All locations that will be instrumented

Gen 2 phased in

Contractual Requirements

- **Two Major Requirements for Suppliers**
  - **Passive Tagging at the case & pallet level IAW Implementation Plan**
  - **Transmission of an Advance Ship Notice (ASN)**

- **General Requirements**
  - **Data encoded on tag must be unique**
  - **Passive Tag is readable at time of shipment IAW MIL-STD 129**
  - **Tag is placed in an appropriate location on the specified level of packaging**
  - **Contractor shall use specified tag constructs [EPCglobal]**
  - **Contractor shall electronically submit Advance Shipment Notices**

Final DFARS Rule

- **DFARS 211.275-2 Policy:** " RFID, in the form of a passive RFID tag, is required for individual cases and palletized unit loads that contain items in any of *the following classes of supply*"   **[2005 List]**

- " **...** and will be delivered to one of the following locations:
  - Defense Distribution Depot in Susquehanna, PA
  - Defense Distribution Depot in San Joaquin, CA. "

- **DFARS 211.275-3 Contract clause:** " Use the clause at DFARS **252.211-7006** in solicitations for contracts that will require delivery of items meeting

Final Clause Effective November 14th 2005

DFARS Clause

- **DFARS 252. 211-7006:**
  - **(a)** Definitions
    - *ASN to Shipping Container*
  - **(b)** (1) Except as provided in paragraph (b) (2) of this clause, the Contractor shall affix passive RFID tags, at the case and palletized unit load packaging levels, for shipments of items that: -
    - **(i)   Are in any of the following classes of supply**
      - » **Subclass of Class I (POR); Class II, VI; IX**
    - **(ii) Are being shipped to: Defense Distribution Depots Susquehanna, PA & san Joaquin, CA.**
  - (2) Bulk commodities are excluded

DFARS Clause 252.211-7006 (continued)

- (c) **The Contractor shall ensure that - -**
  - **(i)** The data encoded on each passive RFID tag are unique (ie, the binary **number** is never repeated on any contract) and conforms to the requirements in paragraph (d) of this clause
  - **(ii)** Each passive tag is readable at the time of shipment IAW MIL-STD-129P (section **4.9.1.1**)
  - **(iii)** The passive tag is affixed at the appropriate location on the specific level of packaging, IAW MIL-STD-129P (section **4.9.2**)

- **(d) Data syntax and standards. The Contractor shall use one or more of the following data constructs depending on type of passive RFID tag being used iaw the tag construct details located at**

   http://www.dodrfid.org/tagdata.htm

DFARS Clause 252.211-7006
(continued)

- – **(e) The Contractor shall electronically submit advance shipment notice(s) with the RFID tag identification (specified in paragraph (d) of this clause) in advance of the shipment in accordance with the procedures at :**

    http://www.dodrfid.org/asn.htm

The ASN is not a new process/transaction. It is the same existing Material Inspection Receiving Report (MIRR) transaction being sent to WAWF with additional data (RFID data elements) added to the transaction.

Passive RFID Tag Data Construct

Header	**2 or 8 (64 bit/96 bit)**
Filter Value	**3 bits**
Partition (96 bit only)	**3 bits**
Company Prefix/CAGE Code	**20; 20 – 40**
	Depends
Item reference/Asset Type	**Depends**
Serial Number	

Fields of the construct are combined to create
a single unique binary number
which is burned into the RFID tag

0010000000011001001010011001100010011100100110100
0010110111111101110000011100000110101

- **For RFID Tags passing thru a PORTAL**
  - **Palletized Loads via Forklift**
  - At 10 miles per hour
  - Read distance must be at least 3 Meters, or ~ 10 Feet

- **For RFID Tags moving on a CONVEYOR BELT**
  - **Individual containers**
  - At 600 feet per minute
  - Read distance must be at least 1 Meter, or ~ 40 Inches

Recommended TAG Placement

- **A few key points about tagging material**

  - **The RF Tag may be integrated with the Shipping Label**

  - **Place the Tag on case, container or pallet in such a way that:**
    - **Physical damage is minimized**
    - **The highest potential for successful interrogation can occur**

- **Some Tagging "Don'ts"**

  - **Do NOT place a tag over a seam**

  - **Do NOT cover a tag with sealing tape or banding**

  - **Do NOT overlap another RF Tag (*at least 4" of separation*)**

Recommended TAG Placement*

Tag Placement on a Palletized Unit Load

Tag Placement on an Exterior Container

NLT 2"

Minimum of 2" from all edges

32 - 48 "
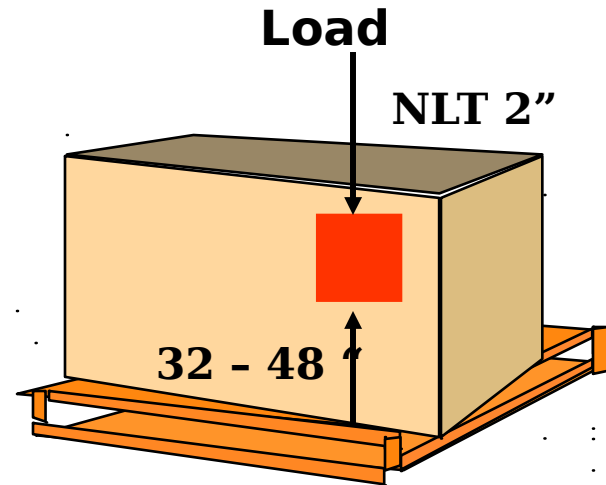
MIL-STD 129P Chg 3 October 2004

Data Constructs

- **2005 DoD will accept 64 or 96 bit Class 0 and/or 1 EPC Tags**

- **Policy Memorandum of July 30, 2005 Attachment 2 Paragraph 2.5 _Passive UHF RFID Tag Specifications_**
    - **EPCglobal™ Subscribers use an EPCglobal™ tag data construct**
    - **Non-EPCglobal™ Subscribers use the DoD tag data construct**

- **Constructs at:
  http://www.dodrfid.org/tagdata.htm**

Option 1: Buy Pre-Coded Tags/Labels

Meeting the Requirement

- **Pre-encoded tags from tag OEMs**
  - **EPC or DoD Construct**
  - **Case or Pallet Filter Value**
  - **Hexadecimal # Printed on tag**
- **EPC Members use EPC Mgr No.**
- **Others use CAGE Code**

Tagging and Data

- **Tag case/pallet at pack/ship point**
  - **Apply per MIL-STD-129**
- **Send ASN via WAWF**
  - **Web-entry method/UDF/856**
  - **WAWF guide for**

Infrastructure and Cost

- **Minimal investment**
  - **Existing IT resources**
  - **Internet connectivity**
  - **Pre-encoded tag stock**
- **Lowest $$ investment**

Option 2: Buy Pre-Coded Tags/Labels: Verify Readability

Meeting the Requirement

- **Pre-encoded tags from tag OEMs**
    - **EPC or DOD Construct**
    - **Case or Pallet Filter Value**
    - **Hexadecimal # Printed on Tag**
- **EPC Members use EPC Mgr No.**
- **Others use CAGE Code**

Tagging and Data

- *Verify Tag ID with Reader*
- **Tag case/pallet at pack/ship point**
    - **Apply per MIL-STD-129**
- *Reader inputs Tag ID into IT for ASN*
- **Send ASN via WAWF**
    - **856 EDI/UDF to WAWF**
    - **Web entry method/format**

Infrastructure and Cost

- *Small investment*
    - **Existing IT resources**
    - **Internet connectivity**
    - **Pre-encoded tag stock**
    - *Reader*
    - *Reader software*
- **Low $$ investment**

Option 3: Print Own Tags/Labels; Verify Readability

Meeting the Requirement

- *Blank Class 1 tags from tag OEMs*
- *Encode/verify tags with reader*
    - EPC or DOD Construct
    - Case or Pallet Filter Value
- EPC Members use EPC Mgr No.
- Others use CAGE Code

Tagging and Data

- *Write Tag ID with Reader*
- Tag case/pallet at pack/ship point
    - Apply per MIL-STD-129
- *Reader inputs Tag ID into IT*
- Send ASN via WAWF
    - 856 EDI/UDF to WAWF
    - Web-entry method/format

Infrastructure and Cost

- *More infrastructure investment*
    - Existing IT resources
    - Internet connectivity
    - *Blank RFID Class 1 tag stock*
    - *Fixed or Hand-Held Readers*
    - *Robust read/write software*
- *Larger $$ investment*

Option 4: Print Own Tags/Labels; Write MSL; Verify Readability

Meeting the Requirement

- *Blank Class 1 tags in Label stock*
- *Encode/verify tags & write MSL*
    - *Single "Smart Label"*
    - EPC or DOD Construct
    - Case or Pallet Filter Value
- EPC Members use EPC Mgr No.
- Others use CAGE Code

Tagging and Data

- *Write Tag ID & MSL data with RFID equipped printer – print "smart label"*
- *MSL/Tag on case/pallet at pack/ship*
    - Apply per MIL-STD-129
- *RFID Printer inputs Tag ID into IT*
- Send ASN via WAWF
    - WAWF EDI/UDF to WAWF
    - Web-entry method/format

Infrastructure and Cost

- *More infrastructure investment*
    - Existing IT resources
    - Internet connectivity
    - *Blank RFID Class 1 tag stock*
    - *RFID reader equipped printer*
    - *Robust read/write software*
    - *Printer controller software*
- *Larger $$ investment*

Option 5: Full RFID Integration

Meeting the Requirement
- *Blank Class 1 tags in Label stock*
- *Blank Class 1 tags*
- *Encode/verify tags & write MSL*
  - *Single "Smart Label"*
  - **EPC or DOD Construct**
  - **Case or Pallet Filter Value**
- *Encode discrete tags with fixed or HHR*
- **EPC Members use EPC Mgr No.**
- **Others use CAGE Code**

Tagging and Data
- *Write Tag ID & MSL data with RFID equipped printer – print "smart label"*
- *Encode discrete item tags (as req) with fixed readers or HHRs*
- *MSL/Tag on case/pallet at pack/ship*
  - **Apply per MIL-STD-129**
- *RFID printer & readers input Tag ID into IT*
- **Send ASN via WAWF**
  - **WAWF EDI/UDF to WAWF**
  - **Web-entry method/format backup**
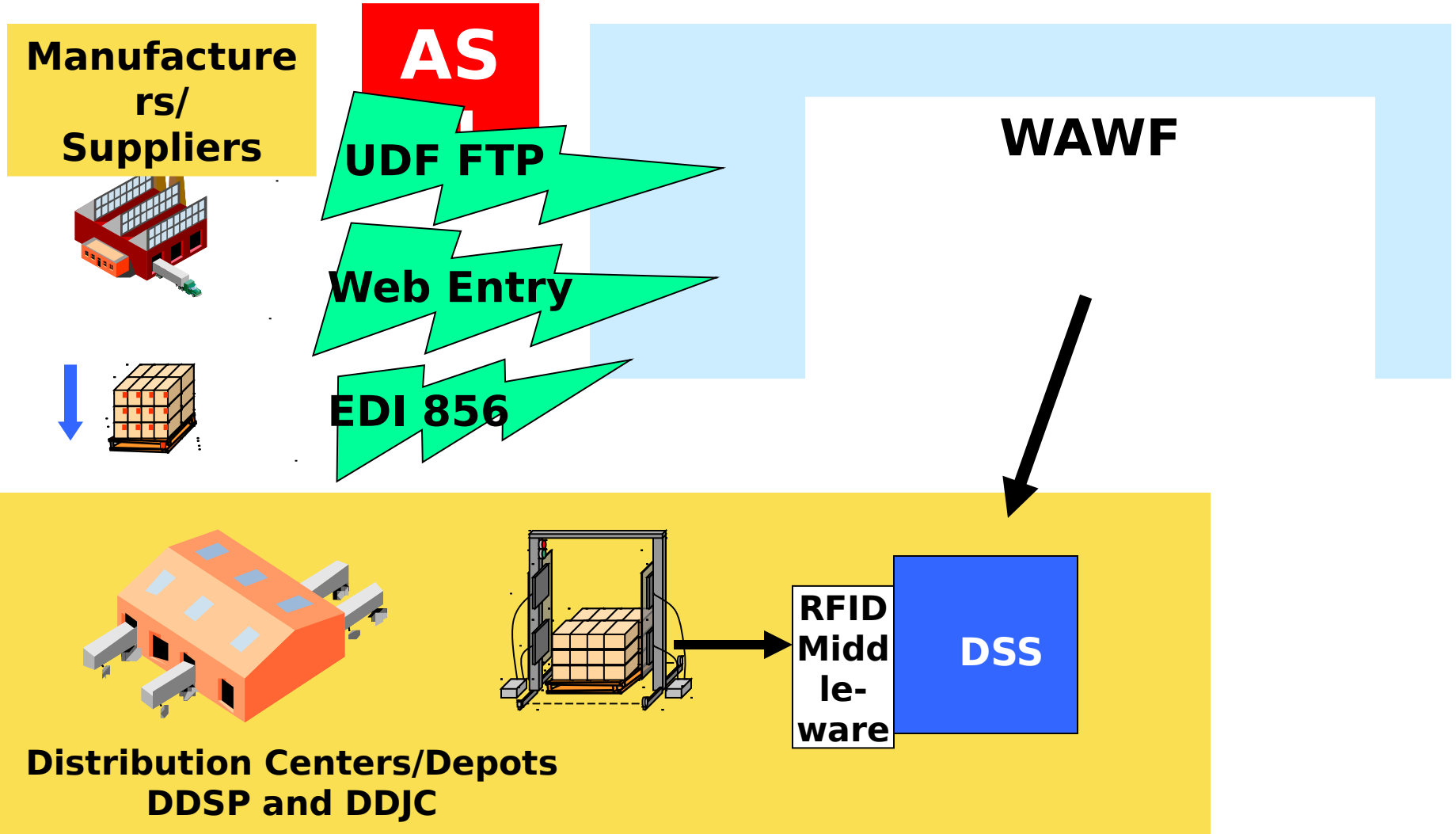
Infrastructure and Cost
- *More infrastructure investment*
  - **Existing IT resources**
  - *Internet and EDI connectivity*
  - *Blank RFID Class 1 tag & Label stock*
  - *RFID reader equipped printer (s)*
  - *Fixed and HHRs*
  - *Robust Edge SW and MW*
  - *Printer controller software*
  - *Servers for Edge SW and MW*
- *Large $$ investment*

RFID Data Flow

Manufacturers/ Suppliers

AS

UDF FTP

Web Entry

EDI 856

WAWF

Distribution Centers/Depots DDSP and DDJC

RFID Middle- ware

DSS

Use of Wide Area Workflow (WAWF)

- **Applies to vendors providing Services and/or Products to DOD**

  - Create invoices & Receiving Reports
  - Electronically route Receiving Reports to the DOD agencies
  - Monitor status of documents as processed by DOD agencies
  - Access documents and ONLY correct the required data
  - **In April 2005, WAWF added the RFID tag ID as an additional data element in the MIRR**

- **Requires Registration with Central Contractor Registry (CCR)**

Major Briefing Points

**Early Applications
with Lessons Learned**

Passive RFID Project @ FISC Norfolk

- **Pilot Site: Ocean Terminal Division, Container Freight Station**

- **Goal: Increase manifest accuracy and inventory accountability by reducing the number of errors**

- **Reference: http://www.acq.osd.mil/log/rfid/lessons_learned.htm**

- **Key Lessons Learned:**

  - **Passive RFID technology is not a panacea**

  - **Antenna placement critical to "good reads"**

  - **The Final Pilot Report notes 25 other lessons**
    - Constant training of employees (Tag placement, etc.)
    - Tagging various types of material (Liquid vs Metal vs Rounded material)
    - Back-scatter effect
    - Customizing "portal" design
    - Quality of Tags
    - Work Around Procedures must be developed

Corps Distribution Center Balad, Iraq

- **Operational Site: LSA (Logistics Support Area) Anaconda**

- **Mission: Cargo Processing Point for multiple classes of supply**

- **Reference: Published article, _Army Logistician_, Mar-Apr 05, Pg 28**

- **Key Lessons Learned:**
  - **Hand-Held Scanning essential in an austere environment**
  - **"Tie" RFID tags on each case to the TCN on Mixed Pallets**
  - **Automation has its limits in austere environments**
  - **Pay special attention to labeling and tag location**
  - **Manual "work-arounds" are mandatory**
  - **Training is essential**

Lessons Learned
Business Processes

- Analyze, **redesign if necessary**, your business processes when integrating Passive RFID technology into your operation to realize maximum benefit

- Implementation Pilot sites show improvement in data accuracy (**3%)** and processing time (**39%**)

- For those sites that integrate RFID technology into redesigned business practices, **reliability of read rates average 96%**

- For those sites that introduce RFID technology into existing business practices <u>without change</u>, **reliability of read rates average 50%**

Lessons Learned
The Architecture

- **System integration may pose a challenge**

  Caused by the complex nature of the supply chain

  Supporting AIS may require different data elements and formats to support the business processes at a given supply chain node

- **A modular and easily adaptive architecture is recommended**

- **Integrating RFID HW/SW with existing legacy data systems and its technical support environment can take significant time and effort to complete**

Lessons Learned
The Technology

- **Passive RFID is a transformational technology**

  - Military effectiveness can be improved

  - Inefficiencies in the supply chain can be reduced

- **Pilot studies to date indicate a reliable read rate of RFID tags at fixed portals in the 90% range**

- **RFID hardware is 100% reliable**

- **Those limitations in the technology can be eradicated, or substantially mitigated, thru the introduction of smart business changes**
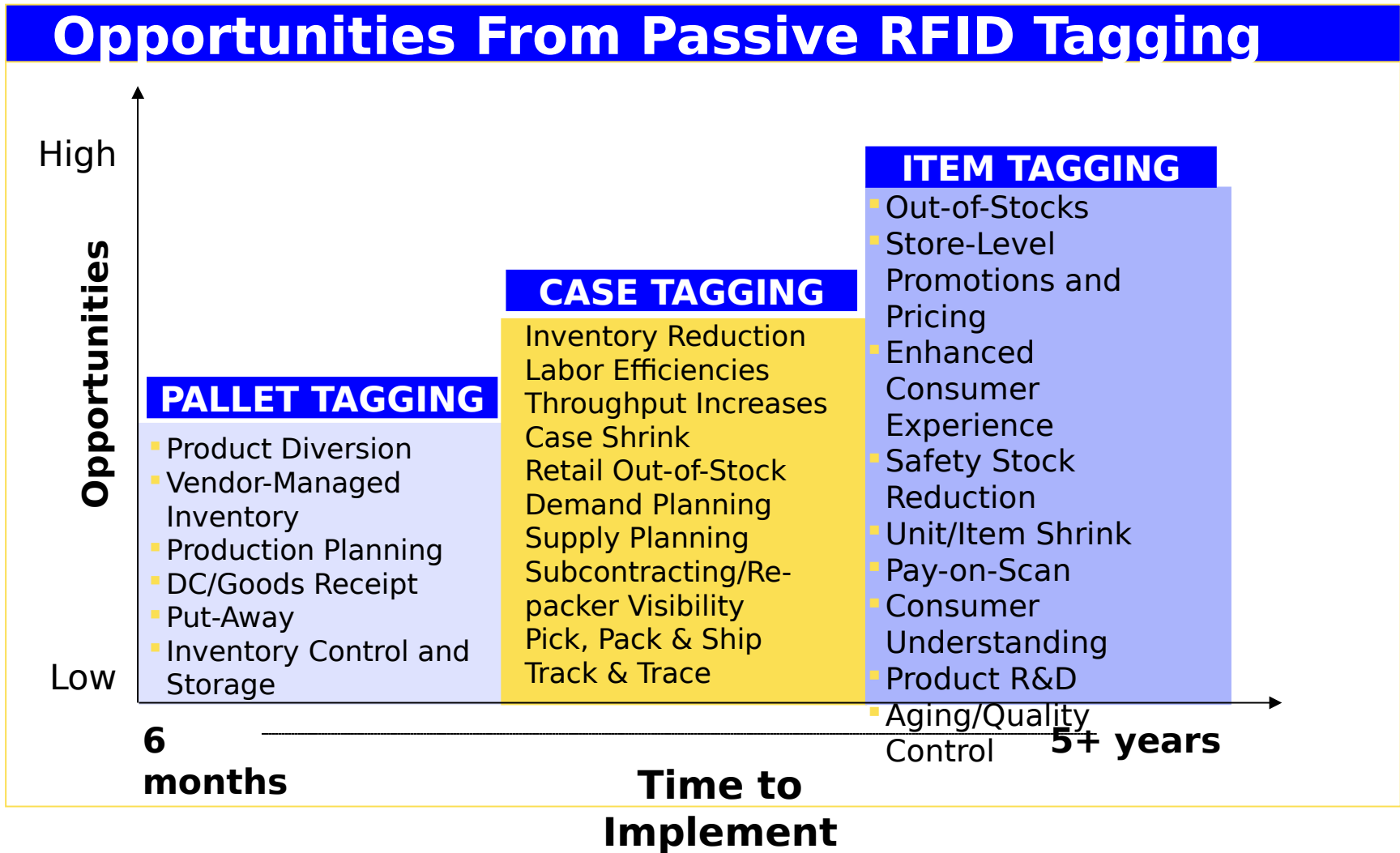
Lessons Learned
The People

- **Effective education and training is a must**

- **A structured approach to process improvement will help overcome any misgivings or misconceptions about Passive RFID technology and the valuable role it can serve in any supply chain operation**

- **Continuous two-way communication among all personnel involved in an implementation is encouraged**

Opportunities from RFID Tagging

Opportunities From Passive RFID Tagging

Opportunities (vertical axis, from Low to High)

Time to Implement (horizontal axis, from 6 months to 5+ years)

PALLET TAGGING
- Product Diversion
- Vendor-Managed Inventory
- Production Planning
- DC/Goods Receipt
- Put-Away
- Inventory Control and Storage

CASE TAGGING
Inventory Reduction
Labor Efficiencies
Throughput Increases
Case Shrink
Retail Out-of-Stock
Demand Planning
Supply Planning
Subcontracting/Re-packer Visibility
Pick, Pack & Ship
Track & Trace

ITEM TAGGING
- Out-of-Stocks
- Store-Level Promotions and Pricing
- Enhanced Consumer Experience
- Safety Stock Reduction
- Unit/Item Shrink
- Pay-on-Scan
- Consumer Understanding
- Product R&D
- Aging/Quality Control

50

Major Briefing Points

Final Thoughts

The Bottom Line

"RFID helps you get good inventory information into the system if you have good business processes to go with it"

Alan Estevez, ADUSD for Supply Chain Integration
Quoted in RFID Journal, Jan-Feb '05
"I Want YOU to Tag Your Shipments"

The RFID Vision

Implement knowledge-enabled Logistics
Through Fully Automated Visibility
And the Management of Assets
In support of the Warfighter

Next Steps

- ◆ **Final DFARS Rule**

  - ◆ **Implement 2006 & 2007 Policy Objectives**

- ◆ **Perform Safety Certification Testing (HERO, HERF, HERP) for passive RFID**

- ◆ **Execute: Ship and Receive Tagged Materiel**

Major Briefing Points

Resources

Resources

- **DoD Suppliers' Passive RFID Information Guide, version 7.0**

- **MIL-STD-129P w/Change 3 of 29 October 2004**

Radio Frequency Identification (RFID) http://www.dodrfid.org

(Office of the Assistant Deputy Under Secretary of Defense (Supply Chain Integration))

Other Resources

RFID Team
info@dodrfid.org

EPC Global
http://www.epcglobalinc.org

Wide Area Workflow (WAWF)
https://wawf.eb.mil

Procurement Technical Assistance Centers (PTAC)
http://www.dla.mil/db/

PM J-AIT (PM Joint-Automatic Identification Technology)
www.eis.army.mil/AIT

FAQ Form

Your Name: _____   **Date of Briefing:** _____

E-Mail Address: _____   **Phone Number:** _____

Question: _____

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Send to: rfidtraining@dau.mil